Eating In The Evening Contributes To Diabetes? Eating Late Is Always Bad!

By Joachim Bartoll | Dec. 21st, 2024

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Recently, the pharmaceutical shills and misinformation "health" platform Medical News Today published an article based on a study investigating the impact on eating large meals in the evening and the connection to increased risk of type 2 diabetes. Although I have covered this subject many times, let's see where they are going with this, what they tell us, and what they do not.

> *"As the holidays approach and the epic meals begin, a study recently published in Nutrition & Diabetes suggests that most of us should avoid the temptation to eat heavily later in the day."*

It should be common sense that you should not eat any majority of your meals later in the day considering digestion and the body's prioritization of allocating resources — you do not want digestion interfering with sleep and thus the detoxification and healing processes.

> *"The study, conducted by teams from the Universitat Oberta de Catalunya in Barcelona, Spain, and from Columbia University, NY, suggests that eating more than 45% of daily calorie intake after 5 p.m. may be linked to poorer glucose tolerance, particularly in older adults with prediabetes or early type 2 diabetes."*

Well, we'll examine these claims later in the article. Still, as said, you should never eat close to bedtime as digestion takes priority over detoxification and healing. And when you sleep, detoxification and healing is usually prioritized and boosted. However, that can only happen in a fasted state and not while you're

still digesting food. So, by eating late, especially larger meals that take a long time to digest, you inhibit your body's ability to detoxify, heal, and recover. And that in turn means that your toxic load continues to grow while damaged tissue remains unhealed, a recipe for declining health and most "modern diseases."

Detoxification is an ongoing process in the human body, always active to eliminate toxins and waste products. However, consuming food or stressing the organs can temporarily slow down or shut down this process. This is because the body diverts its resources to prioritize digestion and absorption of nutrients, as well as responding to the stress signals.

Fasted State for Maximum Detoxification

In a fasted state, after fully digesting a meal, **the body is able to focus its resources on detoxification pathways**. Without the need to process food, the liver and kidneys can redirect their energy to eliminate toxins and waste products more efficiently.

Detoxification

When we sleep, **our body's natural detoxification processes are amplified**. The lymphatic system, responsible for removing toxins and waste products, becomes more active during sleep. This allows for the efficient removal of metabolic byproducts, such as urea, creatinine, and other waste materials, which can accumulate during the day. Additionally, the liver's detoxification pathways, including glutathione production and conjugation reactions, are also enhanced during sleep.

Synergistic Effects

The combination of sleep and fasting during the night creates a synergistic effect, amplifying the body's natural detoxification and tissue healing processes. This is particularly important for maintaining overall health and preventing chronic diseases, as it allows the body to:

- **Remove accumulated toxins**: Sleep-fasted detoxification helps eliminate toxins that can accumulate during the day, reducing oxidative stress and inflammation.
- **Promote tissue regeneration**: Fasted sleep supports the repair and regeneration of damaged tissues, maintaining tissue integrity and function.

Pre-Sleep Digestion Interferes with Sleep

According to biological principles, **eating a meal that triggers the digestive process before bedtime can disrupt sleep quality**. This is because digestion and sleep are mutually exclusive physiological states.

> *"This can significantly harm health over time, leading to a greater risk of type 2 diabetes development, greater cardiovascular risk, and chronic inflammation."*

Indeed. And to be precise, "chronic inflammation" is simply ongoing detoxification and/or healing, as the body can't really keep up with the damage you do through poor diet, eating habits, and toxic exposure, and that is especially true if you eat in the evening or close to your bedtime as detoxification and healing will be hampered most of the night.

According to biology and physiology, chronic inflammation occurs when the body's attempt to repair damaged tissue from toxins is hindered by insufficient resources (malnutrition) or overwhelmed by persistent exposure to the same toxins causing the damage.

And of course, when you sleep, digestion is slowed down as your body tries to initiate and increase other processes vital to sleep and recovery. However, as digestion is prioritized and shuts down detoxification and healing, all processes struggle and none of them will run optimally until you enter a fasted state. That means that it will take longer for the body to neutralize an eventual excess of blood glucose and/or triglycerides, toxins, and other compounds, which in turn will cause damage to soft tissues and the cardiovascular system.

When blood glucose levels rise above normal levels, as maintained by gluconeogenesis, it can cause damage to soft tissues. This is a common complication of diabetes, a condition characterized by high blood sugar levels.

When blood glucose levels are elevated, it triggers a cascade of damage to soft tissues through three primary mechanisms:

- **Glycation**: Excess glucose binds to proteins and lipids, leading to the formation of advanced glycosylation end-products (AGEs). AGEs accumulate over time, causing structural and functional changes in collagen-rich tissues, nerve tissue, and blood vessels.
- **Inflammation**: Elevated glucose levels activate inflammatory pathways, resulting in the release of pro-inflammatory molecules, such as C-reactive protein and homocysteine. This chronic inflammation damages the lining of blood vessels and contributes to the development of diabetic complications.
- **Oxidative Stress**: Excess glucose reduces the effectiveness of antioxidant defenses, allowing reactive oxygen species (ROS) to accumulate and damage tissues. ROS can alter protein and lipid structures, leading to cellular dysfunction and tissue damage.

Elevated blood glucose levels can lead to a range of serious complications, including:

- **Heart Disease**: High blood glucose levels can damage blood vessels, increasing the risk of heart disease, heart attacks, and strokes.
- **Nerve Damage (Neuropathy)**: Prolonged exposure to high blood glucose can damage nerves, causing numbness, tingling, and pain in hands and feet.
- **Kidney Disease (Diabetic Nephropathy)**: Uncontrolled blood glucose levels can damage kidneys, leading to kidney failure and the need for dialysis.
- **Gum Disease (Periodontitis)**: High blood glucose levels create an environment conducive to bacterial growth, increasing the risk of gum disease and tooth loss.
- **Dementia**: Research suggests that elevated blood glucose levels may contribute to the development of vascular dementia, a type of dementia caused by decreased blood flow to the brain.
- **Mood Disorders**: High blood glucose levels have been linked to an increased risk of depression, anxiety, and other mood disorders.
- **Eye Problems**: Prolonged hyperglycemia can damage blood vessels in the eyes, leading to conditions such as diabetic retinopathy, cataracts, and glaucoma.

> *"The previously assumed consequence of late eating was primarily weight gain due to a slower metabolism as we wind down and our bodies prepare for and engage in sleep."*

This only goes to show how uneducated and stupid these "researchers" are. The impact digestion has on detoxification and healing has been well-documented in biology and physiology for a very long time — and so has the body's shift in functions during a fasted state, prioritizing detoxification and healing, which should occur naturally during sleep (unless you stuff yourself prior to sleep.)

> *"The new study suggests that, regardless of a person's weight or general caloric intake, the time of day when they eat can have significant consequences on glucose metabolism."*

While this can be true, you still do not mention the big elephant in the room, the real problem of shutting down your body's natural detoxification and healing

system.

> *"The study classified 26 participants between the ages of 50 and 75 — who had overweight or obesity, as well as prediabetes or type 2 diabetes — into two groups: "early eaters" who consumed most of their daily calories before 5 p.m., and "late eaters" who ate 45% or more of their calories after 5 p.m. for 14 days."*

14 days is a very short period of time to collect any meaningful data. And that indicates that they were totally uninterested in observing tissue damage, toxic load, hormonal fluctuations, and so on, and only looked at blood markers such as glucose levels.

> *"The groups ate a comparable amount of daily calories and macronutrients. However, late eaters consumed almost double the number of calories after 5 p.m., consuming more fat and carbohydrates overall and trending toward higher protein and sugar intake than early eaters."*

Can we please stop using the pseudo-scientific juvenile word "calories." It makes me cringe every time as it illustrates a complete lack of understanding of human physiology, it makes you look like a stupid little wannabe who got his or her diploma from a box of cereals.

Also, being a study, the two groups should have had the exact same meals, simply served at different times. Still, let's go with it.

> *"In oral glucose tolerance tests, the late eaters had notably higher blood glucose levels after 30 and 60 minutes, indicating a lower tolerance of glucose (sugar).*
>
> *This trend was maintained regardless of participants' body weight and fat mass, calorie intake, and diet composition."*

First, while glucose is sugar, you need to explain that it all comes from carbohydrates, no matter the type of carbohydrate, as all of them will be broken down to glucose in the body and enter the bloodstream elevating blood glucose above our safe and natural levels — thus inflicting damage.

All carbohydrates, regardless of their complexity or fiber content, will ultimately break down into blood glucose within the body. This process occurs through digestion and absorption in the small intestine, where enzymes such as amylase and sucrase convert carbohydrates into simple sugars like glucose.

And now to explain, what the researchers actually found was that blood glucose concentrations increased more over time (as the day went on) after each meal in the 'late eaters group,' compared to the 'early eaters group.' Also, the largest differences were seen in glucose concentrations during 30 and 60 minutes after a meal.

Fasting glucose, insulin, and C-peptide did not differ between groups (Table 1). Glucose concentrations increased more over time after an oral glucose load in LE, compared to EE ($p = 0.010$). LE had greater mean glucose during OGTT, greater total glucose area under the curve (tAUC), with greater glucose concentrations at time 30 and 60 min (Table 1) (Fig. 1) (Supplementary Table 4).

This means that consuming meals later in the day as the body is preparing to wind down and sleep, and you naturally begin to move less, burning less blood glucose, these blood glucose levels remain elevated for longer periods of time (doing more damage) and in these individuals, it also seemed like the body took longer to combat the unnatural rise of blood glucose from consuming carbohydrates, as blood glucose levels increased significantly after a meal compared to the other group.

I've already explained this, and in-depth in previous articles. But let's see what they say.

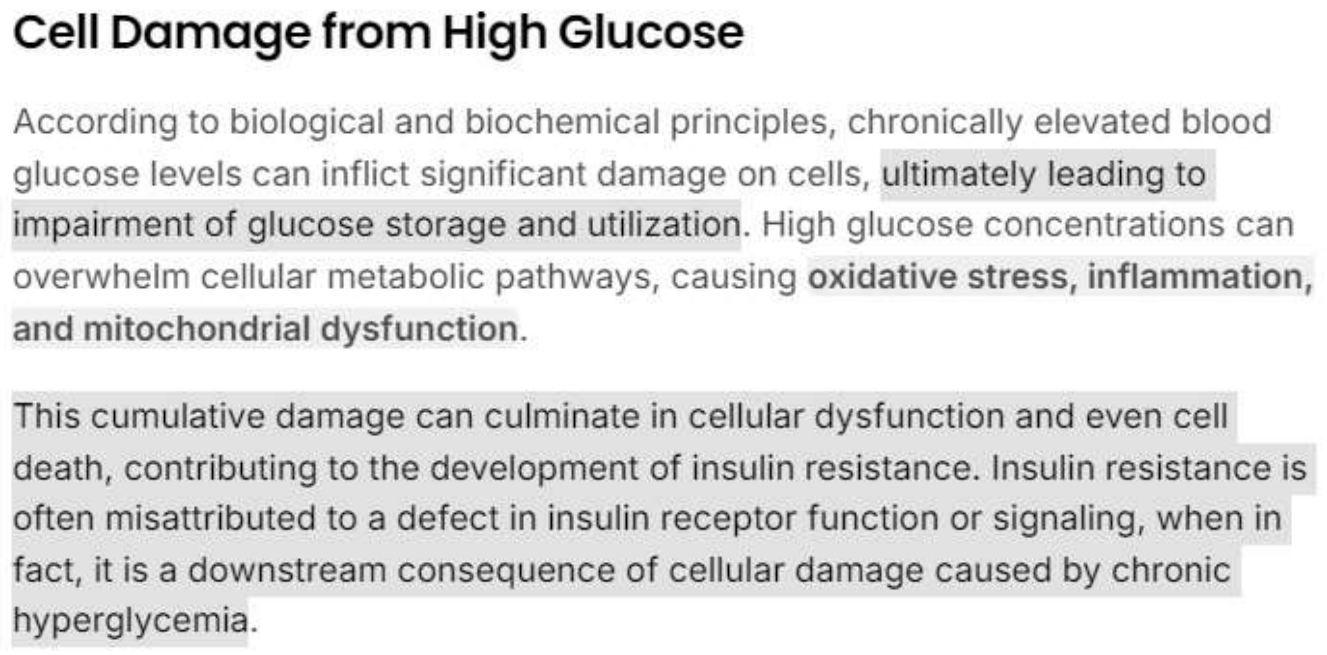
> *"Nate Wood, MD, an instructor of medicine and the director of culinary medicine at the Yale School of Medicine, who was not involved in the study, explained to Medical News Today that eating later in the day or into the night does have the capacity to add weight to the body due to the simple fact that most people are much less active at night, and not active at all as they sleep.*
>
> *The issue with eating late at night, we think, is that we are consuming calories at a time when our body doesn't need them, Wood told us."*

That is a very simplistic and dumbed-down conclusion — and again with the calories.
No, the issue is that your body is preparing for sleep, detoxification, healing, and recovery, and by eating you interfere with these processes.

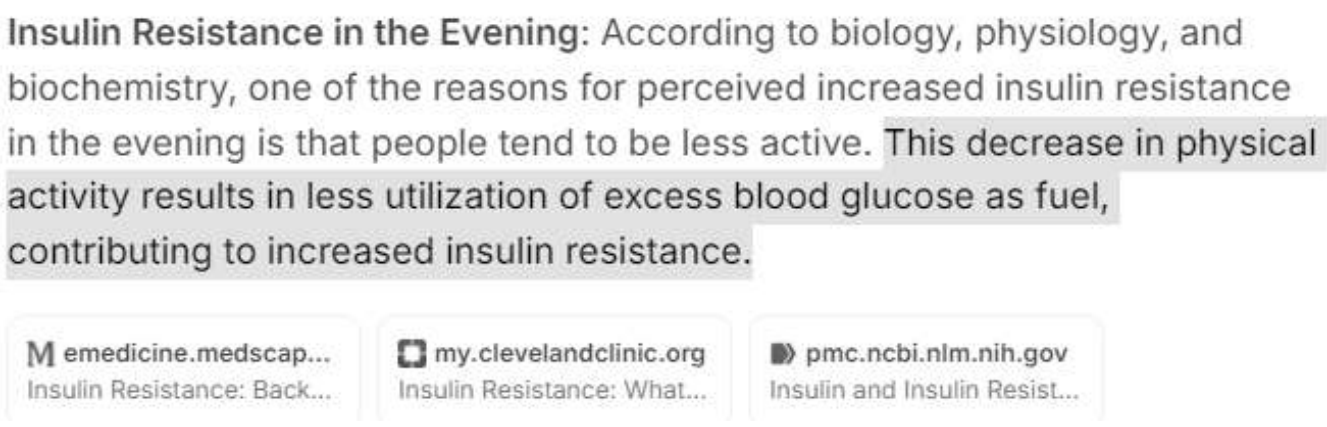
And if you have not eaten enough earlier in the day, your body will need these nutrients to maintain homeostasis, however, the timing is wrong. You should have had that meal earlier in the day. That is all.

> *"Pouya Shafipour, MD, a board-certified family and obesity medicine physician at Providence Saint John's Health Center in Santa Monica, CA, who was not involved in the study, explained that the body is much more insulin-resistant at night, due to circadian rhythms.*
>
> *During the day, there is more insulin secretion and increased pancreatic activity, he explained.*
>
> *When the receptors at the back of the retina sense that light is going down, melatonin starts getting secreted from the pituitary gland, and then that suppresses the pancreas, Shafipour said, adding that eating late can be very harmful in the long and short term."*

Insulin resistance is a man-made construct. When looking at diabetes it's simply accumulated damage to cells due to repeatedly elevating blood glucose by consuming carbohydrates and plant-based unsaturated fats. The cells can no longer store glucose as glycogen or they would die, so they shut down the insulin receptor in order to survive the bad dietary habits of the individual. As for perceived insulin resistance later in the day, this has to do with several factors, all of them easily identified using common sense.


Cell Damage from High Glucose
According to biological and biochemical principles, chronically elevated blood glucose levels can inflict significant damage on cells, ultimately leading to impairment of glucose storage and utilization. High glucose concentrations can overwhelm cellular metabolic pathways, causing oxidative stress, inflammation, and mitochondrial dysfunction.
This cumulative damage can culminate in cellular dysfunction and even cell death, contributing to the development of insulin resistance. Insulin resistance is often misattributed to a defect in insulin receptor function or signaling, when in fact, it is a downstream consequence of cellular damage caused by chronic hyperglycemia.

First and foremost, most people tend to be less active as the day goes on. That means less use of glucose for physical activity, meaning that elevated glucose levels will take longer to neutralize than earlier in the day when the person moved around more.


Insulin Resistance in the Evening: According to biology, physiology, and biochemistry, one of the reasons for perceived increased insulin resistance in the evening is that people tend to be less active. This decrease in physical activity results in less utilization of excess blood glucose as fuel, contributing to increased insulin resistance.
emedicine.medscap...
Insulin Resistance: Back...
my.clevelandclinic.org
Insulin Resistance: What...
pmc.ncbi.nlm.nih.gov
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And again, the body is winding down towards the evening, changing priorities as the night approaches, which means that although digestion takes priority all other processes are on the opposite spectrum, so absorption, conversion, and utilization of nutrients, including blood glucose, takes longer.

Insulin Resistance in the Evening: According to biology, physiology, and biochemistry, one of the reasons for perceived increased insulin resistance in the evening is that the body is preparing for sleep. As the body prepares for sleep, both digestion and utilization of nutrients, including blood glucose, slow down. This slowdown occurs as other processes needed for sleep are initiated, leading to a perceived increase in insulin resistance.

This is why some people who are active in the evening can get away with eating late, as they actively use some of that blood glucose as fuel, while it's a pure disaster for other less active people.

The same as any other meal during the day. Animal-based foods. High fat, moderate protein, and absolutely no carbohydrates or plant-based food ever. And of course, no meal later than 4 to 6 hours before bedtime to make sure you're in a fasted state when you fall asleep.

> *"It is probably not the most popular answer during the holidays, but dinner should ultimately be the lightest meal you eat, Shafipour advised.*
>
> *This means fewer carbohydrates — so avoiding pasta, mashed potatoes, rice — and indulging less in dessert and alcohol."*

Why the frikkin' heck do you mention alcohol as if it is a food item or even a macronutrient? That is not the first time Medical News Today has categorized alcohol as something natural to one's diet. That is total insanity. Alcohol is a poison and no sane person should ever consume it.
While I can excuse deceived and dumbed-down people who consume plant-based

garbage or even processed foods due to their sheer ignorance and lack of knowledge and understanding of human physiology, every single person knows that alcohol is bad, that it damages your body. So, why the heck would you ever consume it? Willingly damaging yourself?! Again, total insanity.

Anyway, yes, avoid carbohydrates. Actually, you should never consume carbohydrates as they will raise blood glucose above normal levels which means a lot of damage to all your soft tissues.

> *"Because of insulin resistance, he added, there is a daytime window where those larger-carbohydrate meals can work with your metabolism.*
>
> *The most active time in terms of metabolism is plus and minus an hour between probably about 10 a.m. to 4 or 5 p.m.," Shafipour said."*

No, you should not consume carbohydrates at all. Recommending anyone to do so makes you a criminal as you deceive people into damaging themselves — especially if they're not physically active.

> *"The balance between sleep and eating is important to strike for metabolism and overall health. Because sleep is so important, Wood said that a consistent pattern each night was the most important factor.*
>
> *Most adults need 7 to 8 hours of sleep per night. Getting less than that or more than that can have negative effects on our health, Wood pointed out."*

Yes, but why do you not explain the detoxification and healing cycle and processes of the body, or how important it is to be in a fasted state when sleeping? Probably because none of you want people to be healthy, as that would cut into your profits and it does not fit your agenda of a weak, docile and dependent population.

> *"I recommend patients try to go to bed at the same time every night. This means that if you go to bed at 10 p.m. on weeknights, try to go to bed no later*

> *than 10:30 or 11:00 p.m. on weekends. The more consistent we can keep our sleep schedule, the better, he advised."*

Only non-thinking people stay up later on weekends because of some weird idea they got when they were younger and foolish. It's common sense that you should go to sleep at about the same time every single day. And you should go to bed before 10:00 p.m., preferably around 9:00 p.m. as that will optimize your detoxification, healing, and especially your very important growth hormone release. I've covered this and the science behind it many times.

According to biological and physiological principles, going to sleep **between 9:00 p.m. and 10:00 p.m.** is considered optimal for several reasons:

Growth Hormone Secretion: Research suggests that growth hormone levels peak immediately after sleep onset, with significant increases during slow-wave sleep (SWS) compared to other sleep stages. This optimal timing allows for enhanced growth hormone production, which is essential for tissue repair, growth, and development.

Detoxification: The body's natural detoxification processes are enhanced during sleep, particularly in the hours between 9:00 p.m. and 2:00 a.m. When you go to sleep before 10:00 p.m., your body has a longer window for detoxification, allowing for more efficient removal of waste products and toxins.

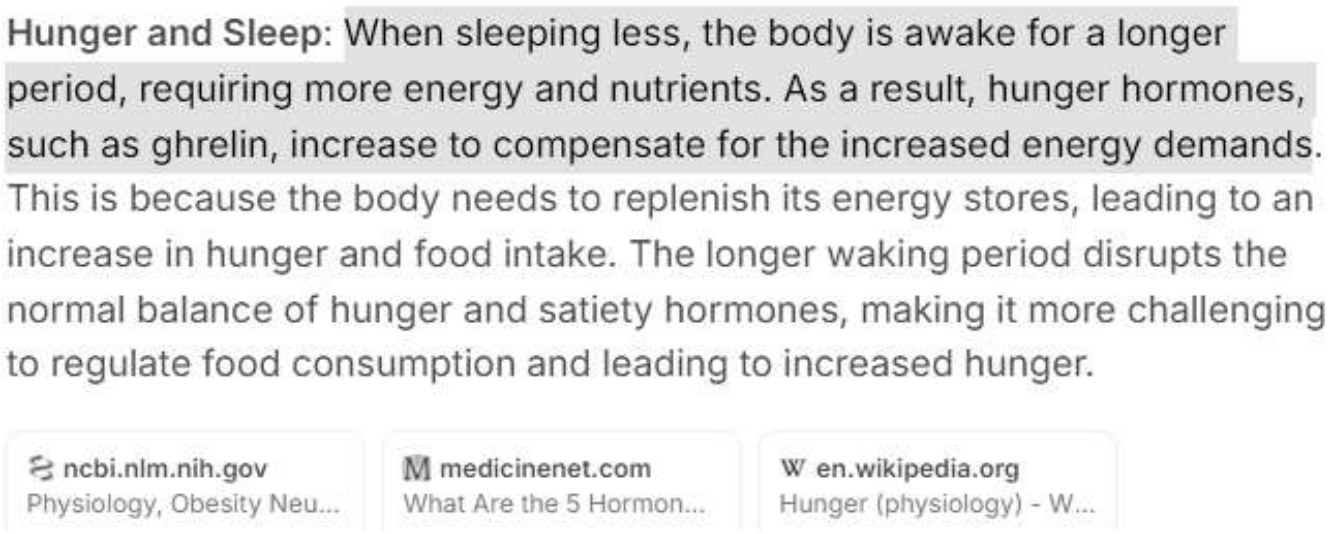
Autophagy: Autophagy, a natural process of cellular recycling, is also optimized during sleep. By going to bed earlier, you give your cells more time to engage in autophagy, which helps remove damaged or dysfunctional cellular components, promoting overall cellular health and resilience.

Healing and Repair: Sleep plays a crucial role in tissue repair and healing. When you go to sleep before 10:00 p.m., your body has a longer period for repair and regeneration, which is essential for maintaining physical and mental health.

> *"Sleep is also by itself very important, because we have the hormone leptin, which is an appetite suppressing hormone, get secreted, and it peaks around 6 or 6 and a half hours of sleep. So optimal sleep schedule would be for an average adult would be between 7 to 8 hours so you get enough leptin and ghrelin, which is the appetite hormone that one also doesn't stay up too much*

> *during the day. So if we sleep less than 6 and a half hours, we'll notice that we're hungrier during the day looking for food more."*

Uhm, no. That is not how it works. It works on a sliding scale. You use a lot less energy when sleeping, so the more sleep you get, the less "energy" you need to consume. So, if you sleep very little and are up moving about, you'll need to eat more, and you'll also need more nutrients. That is why you might feel a bit hungrier if you slept less.


Hunger and Sleep: When sleeping less, the body is awake for a longer period, requiring more energy and nutrients. As a result, hunger hormones, such as ghrelin, increase to compensate for the increased energy demands. This is because the body needs to replenish its energy stores, leading to an increase in hunger and food intake. The longer waking period disrupts the normal balance of hunger and satiety hormones, making it more challenging to regulate food consumption and leading to increased hunger.
ncbi.nlm.nih.gov
Physiology, Obesity Neu...
medicinenet.com
What Are the 5 Hormon...
en.wikipedia.org
Hunger (physiology) - W...

And that was it for MNT's article on this subject. Not much useful information at all, and they cleverly kept their readers in the dark by avoiding the real issues with eating late. Still, it was one of the better articles they've published in a long while, as the core message of "eating late is bad" is at least true.
And this also ties in with the fact that we are made for a "time restricted eating" pattern, as in intermittent fasting. However, most people do it wrong, as you should start eating early in the day, and stop eating in the afternoon, fasting until the next day and utilize sleep to its maximum by being in a fully fasted state.

Historical Context of Eating: According to biology, anthropology, and physiology, a time-restricted approach to eating is indeed natural for humans. Historically, humans did not have access to food 24/7, and meals were often scarce, leading to a natural pattern of eating that was restricted to certain times of the day.

- **Food Scarcity**: In the past, food was not always readily available, and humans had to adapt to periods of feast and famine. This led to the development of physiological mechanisms that allowed humans to survive on limited food intake.
- **Limited Meals**: As a result, humans typically had only one or two meals a day, which is in contrast to the modern pattern of eating multiple meals and snacks throughout the day.
- **Evolutionary Adaptation**: This historical pattern of eating is thought to have shaped human physiology, with the body adapting to function optimally on a restricted eating schedule.
- **Time-Restricted Eating**: A time-restricted approach to eating, where food intake is limited to certain hours of the day, is believed to be more in line with human evolutionary history and may have potential health benefits.

If you need help with any kind of health problems or transitioning from your current way of eating to our natural species-appropriate, species-specific way of eating, I'm available for both coaching and consultation.

Coaching and Consultation

And if you found the article and my insights helpful and enjoy my daily free information, please consider donating to help pay the webhosting bills and keep the site running. And if you're interested in discussing and sharing information

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